

Emerging Markets

Managing Global IT Teams: Considering Cultural Dynamics

Successful global IT team managers combine general distributed team management skills enhanced with cultural sensitivity.

WORKING WITH A globally distributed IT team can offer substantial benefits—sometimes it is the only way to address certain tasks—but it also presents challenges. Many studies have addressed how to work well in these situations: notably, Nuna-maker and colleagues present nine principles for virtual teamwork⁷ (see Table 1). Although this advice is likely to be helpful in general, in our view it insufficiently addresses differences in managing teams involving IT staff from different cultures.

Using A Cultural Lens

Applying a cultural lens to Table 1, we can see several areas where this generally applicable advice needs further refinement to account for variations in cultural orientation.^a These adaptations include:

► **Reward structures.** In general there is significant variance in what individuals regard as a positive reward. We expect these differences to be even more pronounced when cultural differences are accounted for. For example, in an individualistic culture like the U.S. a corner office may be viewed as a great incentive and reward, whereas prestige or leadership title may be more valued in collectivist cultures as found in Asia. Through wide-ranging studies of IT employees, Couger^{2,3} and col-

leagues frequently found differences in motivators between workers in different countries. In lower-wage countries, issues with compensation are weighted much more heavily, while issues with challenge and promotion are more heavily valued by IT staff in higher-wage countries.

► **Be more explicit.** This admonition may come easily to people of a low-context culture such as Australia where individuals tend to speak bluntly without elaboration. But it may take away some richness from those more comfortable in a high-context culture such as the Middle East. Perhaps, in spite of cultural issues, explicit communication is a necessary ingredient for successful globally distributed IT teams. If so, distributed team members in high context countries may be hard pressed to use the systems in the manner intended. In order to win contracts and successfully complete projects, individuals in such (often developing) countries may simply need to conform to norms that are not preferred. This suggests the need for designers to consider creation of

Global IT team dynamics will vary based on the degree to which group membership is voluntary.

^a We follow Hofstede's⁵ broadly used cultural dimensions throughout this column. Readers are directed to this book for a full treatment of this topic.



alternative tools and practices that incorporate a wider variety of cultural norms.

► *Train to self-facilitate.* This may be difficult advice for people from high power distance cultures such as those in Asia that value hierarchy. It may be that global IT team leaders working with large numbers of people from such cultures need to extend their range of controlling strategies to successfully run such distributed teams. A transition period of moving from highly directive to more self-governing teams will be required. Managers also need to be careful in responding to early efforts at self-facilitation. Often self-facilitating groups go in unexpected and even potentially harmful directions. The manager must accept some amount of non-optimal decisions and behaviors but understand how to facilitate the group to grow self-direction but within acceptable bounds.

Cultural Skills

Having suggested that some general principles for managing globally distributed IT teams must be modified by

a cultural lens, we want to look more broadly at what cultural skills are critical for successful management of such teams where membership crosses national, organizational, or professional borders.

Before delving into particular skills, we want to be clear that these virtual teams come in many stripes and flavors with their dynamics varying as a result. They include: IT-focused communities of interest within or across organizations; ad hoc and project IT teams charged with creating particular results on a one-time basis; and ongoing teams with portfolios of projects, as found with offshoring activities ranging from help desks through sophisticated application development.

Global IT team dynamics will vary based on the degree to which group membership is voluntary. As participation is more voluntary, the leader will typically have less leverage to be directive. This distinction is clearly drawn contrasting loose communities of interest pertaining to hardware, software, information policy, appli-

cations, or IT industry firms' interest groups with focused IT development teams internal to a firm. Between these extremes are the many IT project teams that individuals may simultaneously be assigned to that compete for employee attention. Even within a firm, it is often a mistake to assume that an individual "required" to participate in a group will in fact devote full attention to the matter. It is safest to assume that even when participation is required, enthusiasm and proactive contribution are optional and require persuasion, rewards, or both to maximize individual input.

Distributed team dynamics will also vary with the degree to which the commitment is long term versus short term. Is there an expectation that the team will develop a single product (or fulfill a particular mission) or continue to function together over time, perhaps monitoring a range of applications or continuing to add features for future releases? If expectation of continuation is high, there is greater rationale for investing in relationships, effective processes, and stronger tools than

Table 1. Principles for effective virtual teamwork (from Nunamaker⁷).

Principles	
1	Realign reward structures for virtual teams
2	Find new ways to focus attention on task
3	Design activities that cause people to get to know each other
4	Build a virtual presence
5	Agree on standards and terminology
6	Leverage anonymity when appropriate
7	Be more explicit
8	Train teams to self-facilitate
9	Embed collaboration technology into everyday work

where the only concern is getting the particular task completed. In the short run, this may increase the costs of the particular project, but in the long run it may create the basis for efficient performance of repeated tasks. Team members from long-term orientation cultures will likely be easy to persuade to invest in team-building activities. Those from a short-term orientation culture may see these investments as a waste of effort.

Dynamics will also vary with group size and the number of cultures represented. One IT development project familiar to the authors had more than 70 team members from 10 countries

on three continents. It was extremely difficult to find approaches workable for the whole group. This task was particularly challenging as part of the team was co-located and others were distant, the work was highly interdependent, major software tools were proprietary thus available only at the headquarters site, and the European team leaders took a highly “self-facilitate” approach that resulted in much uncertainty, redundancy, and ill feeling. Given that the project was never completed and that bitterness remains among some team members to the present, it is not clear what solution would have fully addressed this situation. However, it is clear that not directly addressing cultural issues was not a successful strategy.

In our view there are five essential facets of all team and project activities that carry over and are particularly pronounced in the global IT team setting. These are supervision of tasks, communication, time and agenda, work process, and the environment (see Table 2).

The Cross-Cultural Manager

It stands to reason that managers of all globally distributed IT teams need basic skills in all five of the Table 2 areas. We believe the cross-cultural IT team manager needs two additional skills.

The cross-cultural distributed IT team manager must recognize that

there are often many approaches to doing almost anything. Following the systems concept of equifinality, there are many ways to arrive at a destination. The culturally sensitive manager must recognize the existence of these multiple paths. They will accumulate knowledge regarding how to evaluate the different benefits, costs, and risks of different approaches. And they will recognize that an unfamiliar approach may in fact be the best one for a particular circumstance.

Thus, there are circumstances where introducing a “foreign” cultural approach may result in desired outcomes. Mexican group facilitators reported success when purposely introducing more formal processes into meeting support systems in order to shift the culture of meetings to greater standardization, focus on outcomes, and retention of discussed ideas.⁶

In considering multiple paths, however, the manager encounters inevitable trade-offs between standardization and customization. Developing common standards while avoiding significant loss of employee productivity can be challenging. Decoupling issues can often provide a solution to this trade-off. For example, a co-located subgroup may discuss a project in their home language but create software modules conforming to standard formats. The worldwide project management director for a huge global IT company described her firm as setting a project management standard and training all new managers to this standard. At the same time successful “legacy” managers were encouraged to move to the standard, but were given much latitude for non-standard but effective methods. In the short run there continued to be quite a bit of diversity in approaches, with the expectation that a standard would emerge over time.

The cross-cultural distributed IT team manager must develop a broad set of approaches to the five teamwork facets and become skilled at selectively applying these. This means developing varied approaches to monitoring employee work, to setting benchmarks and to measuring progress. An example of this occurred among Irish IT workers at a U.S. multinational who balked at using time cards rather than simply

Table 2. Facets of global IT team and project activities.

Facet	Description
Task supervision	intelligent division and assignment of tasks, monitoring task completion for completeness and quality, integrating completed tasks into larger team products
Communication supervision	ensuring continued participation, full and complete exchange of information, surfacing and resolution of conflict, conducting synchronous and asynchronous interchanges
Time and agenda supervision	setting up intelligent time frames for tasks, reorganizing critical paths for sequencing of activities, ensuring priority attention to the project relative to other group member obligations
Work process supervision	ensuring an understanding and buy-in for common goals, negotiating common tools and work processes, maintenance of common bodies of knowledge and version control from which all members draw
Environment variation supervision	ensuring that terms are used consistently even where their reference difference varies in different locations (for example, accounting terms that pertain to local taxation or reporting within different countries or regions), ensuring smooth acceptance of varied holidays and labor rules, working with time zones and other physical geography issues

working to finish particular tasks.⁸ Such a practice was not common among these workers, even though quite natural for U.S. firm management. In the end, a compromise was reached to use the time cards, however, on a flexible schedule so that workers could arrive or leave early or late as long as their times were recorded.

It also means taking care regarding the negotiation of a common vocabulary, recognizing and resolving conflicts, soliciting and responding to feedback, and the selection of communication tools. Groups will vary in their preferred communication modes as well as their understanding of messages within and across groups, and across cultures. For instance, Chinese staff frequently prefer to use instant messaging and telephone, while Australians prefer to use email for communicating.⁴ Tactics for managing cultural communication differences in global IT teams include establishing norms for practices in using communication tools based on face-to-face training and setting up a shared and consistent project-related vocabulary approved by members of each nationality team.¹

Sensitivity to decision-making preferences can also help groups stay on track. As a rule of thumb, the global IT team manager will want to be clear about the degree to which he or she solely makes key decisions, consults with team members, then makes decisions, and delegates decision making to team members. Difficulties in implementing decisions and taking actions can come from fuzziness in communicating how such decisions are to be made as much as from the chosen approach itself. In our experience a “demand” for full adherence to the IT team manager’s unilateral decisions can be smoothly (or poorly) communicated even with highly “low power distance” personnel. Retention of full decision making by the manager can be communicated clearly in terms of overall project effectiveness or the employees’ self-interest.

Conclusion

In sum, the role of the global IT team manager requires general distributed team management skills enhanced with cultural sensitivity. Such a man-

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ager needs awareness of “equifinality” and a large palette of approaches and methods that can be applied as circumstances vary. This should include sensitivity to varied ways to approaching tasks, communication, time and agenda, and work processes, while remaining aware of and adjusting for environmental concerns. The excellent culturally sensitive manager knows or learns when and how to apply these varied techniques as the particular situation demands. **C**

References

1. Casey, V. Developing trust in virtual software development teams. *Journal of Theoretical and Applied Electronic Commerce Research* 5, 2 (Feb. 2010), 41–58.
2. Couger, J.D. and O’Callaghan, R. Comparing the motivation of Spanish and Finnish computer personnel with those of the United States. *European Journal of Information Systems* 3, 4 (1994), 285–292.
3. Couger, J.D. et al. Commonalities in motivating environments for programmer/analysts in Austria, Israel, Singapore, and the U.S.A. *Information & Management* 18, 1 (Jan. 1990), 41–47.
4. Guo, Z, Tan, F.B., Turner, T., and Xu, H. An exploratory investigation into instant messaging perceptions and preferences in two distinct cultures. *IEEE Transactions on Professional Communication* 51, 4 (Dec. 2008), 1–20.
5. Hofstede, G.H., Hofstede, G.-J., and Minkov, M. *Cultures and Organizations: Software for the Mind*. Third Edition McGraw Hill, New York, NY, 2005.
6. Niederman, F. Facilitating computer-supported meetings: An exploratory comparison of U.S. and Mexican facilitators. *Journal of Global Information Management* 5, 1 (Jan. 1997), 17–26.
7. Nunamaker, J.F., Jr., Reinig, B.A., and Briggs, R.O. Principles for effective virtual teamwork. *Commun. ACM* 52, 4 (Apr. 2009), 113–117.
8. Weisinger, J.Y. and Trauth, E.M. Situating culture in the global information sector. *Information Technology and People* 15, 4 (Apr. 2002), 306.

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Calendar of Events

April 18–20

International Conference on Multimedia Retrieval, Trento, Italy,
Sponsored: SIGMM,
Contact: Francesco G.B. De Natale,
Email: denatale@ing.unitn.it

April 20–22

International Conference on Fundamentals of Software Engineering, Tehran, Iran,
Contact: Sirjani Marjan,
Email: msirjani@cwil.nl

May 1–4

International Symposium on Networks-on-Chips Pittsburgh, PA,
Sponsored: SIGDA, SIGARCH, SIGBED,
Contact: Diana Marculescu,
Email: dianam@cmu.edu

May 2–6

The Tenth International Conference on Autonomous Agents and Multiagent Systems, Taipei, Taiwan,
Contact: Liz Sonenberg,
Email: 1.sonenberg@unimelb.edu.au

May 3–6

16th International Conference on Animation, Effects, Games and Interactive Media, Stuttgart, Germany,
Contact: Thomas Haegele,
Email: thomas.haegele@filmakademie.de

May 6–9

International Conference on Computer Supported Education Noordwijkerhout, Netherlands,
Contact: Monica Saramago,
Email: monica@insticc.org

May 7–8

International Conference on Cloud Computing and Services Science, Noordwijkerhout, Netherlands,
Contact: Monica Saramago,
Email: monica@insticc.org

May 7–9

International Conference on Cloud Computing and Services Science, Noordwijkerhout, Netherlands,
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